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RESEARCH ARTICLE

Towering above – an interpretation of the Late Iron Age architecture at Toftum Næs, Denmark

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ABSTRACT

The newly excavated sites of Toftum Næs, Jutland (Denmark), will be presented, and the special features that have been registered here will be discussed. In particular, the conspicuous architecture will figure prominently; a very sturdily built and thus high structure that can only be interpreted as a tower placed along with a succession of larger hall-type buildings, and a possible ritual building. This 'aristocratic quarter' is in direct contact with another area characterized by a larger pit-house cluster of more the 100 units, and placed in the vicinity of two conjoining streams. The different structures mentioned and their internal, topographical distribution as well as architectural features will be incorporated as the main base for a functional interpretation of and motive behind the buildings and the activities pertaining to the site in general. The topic of commercial control and what type of influence the aristocracy had on the early development on these types of sites will be included. Furthermore, the structural fluctuation of the site at Toftum Næs, and in particular the changes that seem to have taken place during the main use-phase both at the site in question and with regard to the overall development of aristocratic sites with production areas and at the Viking Age towns, will be debated in this paper.

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Iron Age; architecture; hall-building; Viking Age hall; production site; tower; central place; pit-house; ritual; hov

Toftum Næs – the site

A promotory, where Mønsted Å and Jordbro Å conjoin, forms the natural borders of a spectacular site from the Late Iron Age and the Viking Age. The site lies in the middle of Fjends Herred at the cross-section of five parishes (see Figure 1). The name itself – Toftum – can be dated back to the Viking Age and several other place-names suggest a high level of activity in this area (Laurine Albris pers. comm.). To the west, on the far side of Jordbro Å the Tinghøj mound is situated, which denotes a judicial function. To the east, on the other side of Mønsted å, we find Lundgård Manor. Lund denotes a small grove and is often associated with sacral activities (Vikstrand 2004). Along the same line, the site Gundelund appears, which not only again refers to the 'lund' concept, but with a prefix Guthen, seemingly refers to Mønsted Å as a sacred stream with a scared grove close to it. Another interesting place is Bryrup, possibly deriving from *bryde*, which denotes a bailiff. The presence of a bailiff points towards the elite and major landowners with a higher authority. The same interpretations apply for Drenggaard, which indicated the presence of *drengir*, a class of warriors or servants in a loosely organized manorial structure (Christensen 2010a, p. 130). In combination, the place-names surrounding Toftum Næs specify several central functions as well as a stratified society appearing in the Late Iron Age where sacred, military and judicial denotations cluster together.

In 2009 initial attention to the site was made due to a series of metal detector finds, and the registration of several conspicuous structures identified on aerial photos. The two streams demarcate the sites at the eastern and western sides, respectively, and where they conjoin it marks the sites' northern border. Southwardly, the landscape rises slightly only to be cut through by a deep sunken road. On this rise, the layout of walls and roof-bearing posts could be seen on the overview photos, whereas the majority of the pit-houses are placed further north and close to the conjoining streams. A trial excavation revealed a high frequency of features, confirming the presence

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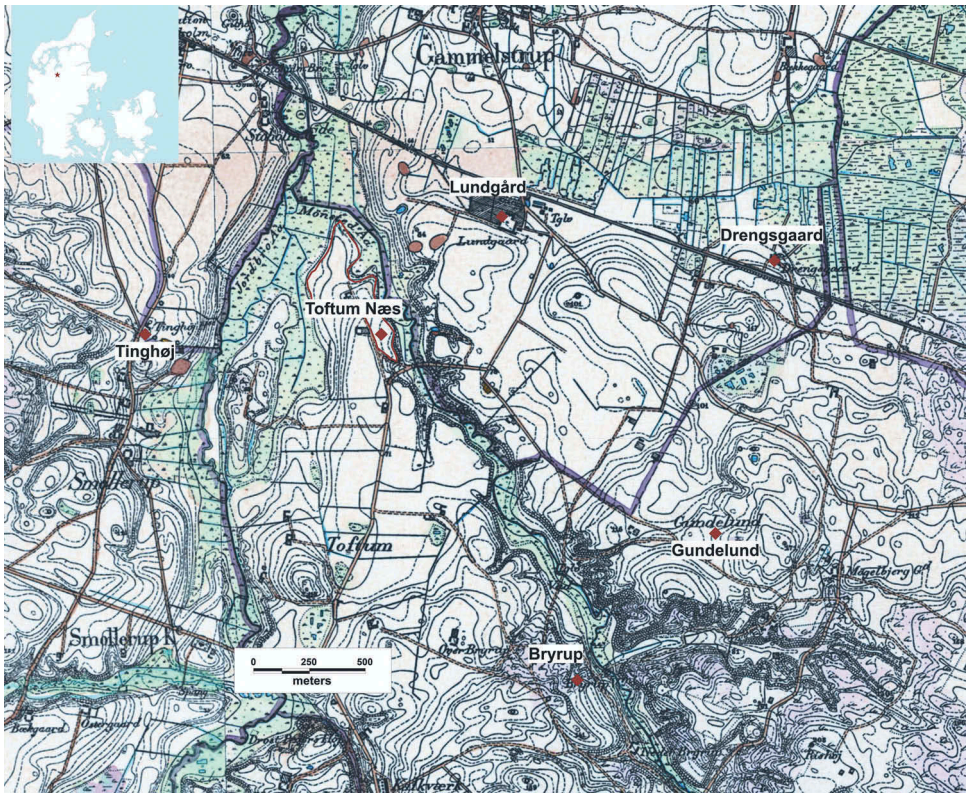

Figure 1. Toftum Næs is situated around 10 km south of Hjarbæk Fjord/Limfjorden where the two streams of Mønsted Å and Jordbro Å conjoin. Nearby interesting place-names are plotted on the map. Map: © Styrelsen for Dataforsyning og Effektivisering.

of a continuous settlement, and at the same time several conspicuous structures were revealed. Among these, a very sturdy, quadratic building of a unique architecture figures prominently. In 2014–15 Viborg Museum, in cooperation with the National Museum and Aarhus University, excavated ca. 7000 m^2 – less than 10% of the site. However, the results already provide strong evidence of a remarkable site. The registered structures can be interpreted as a chieftain's manor with numerous noticeable buildings, and a main use-phase between AD 600 and 1000. During the excavation 20 wooden buildings in different sizes, seven pit-houses, numerous fences and 12 older graves from the Roman Iron Age were investigated (Terkildsen 2014, 2015). The amount of overlapping structures and numerous phases challenges the recognition of the function of the individual buildings as well as when establishing which buildings are concurrent. Some of the more notable structures will be presented here (see Figure 2).

In the northern part of the excavated areas, two adjacent buildings have been registered and both are of a hall-type construction.[1] The oldest is approx.

Figure 2. The excavated area with the major structures outlined in solid, and the house plans in a shaded outline. Major constructions mentioned in the text are numbered.

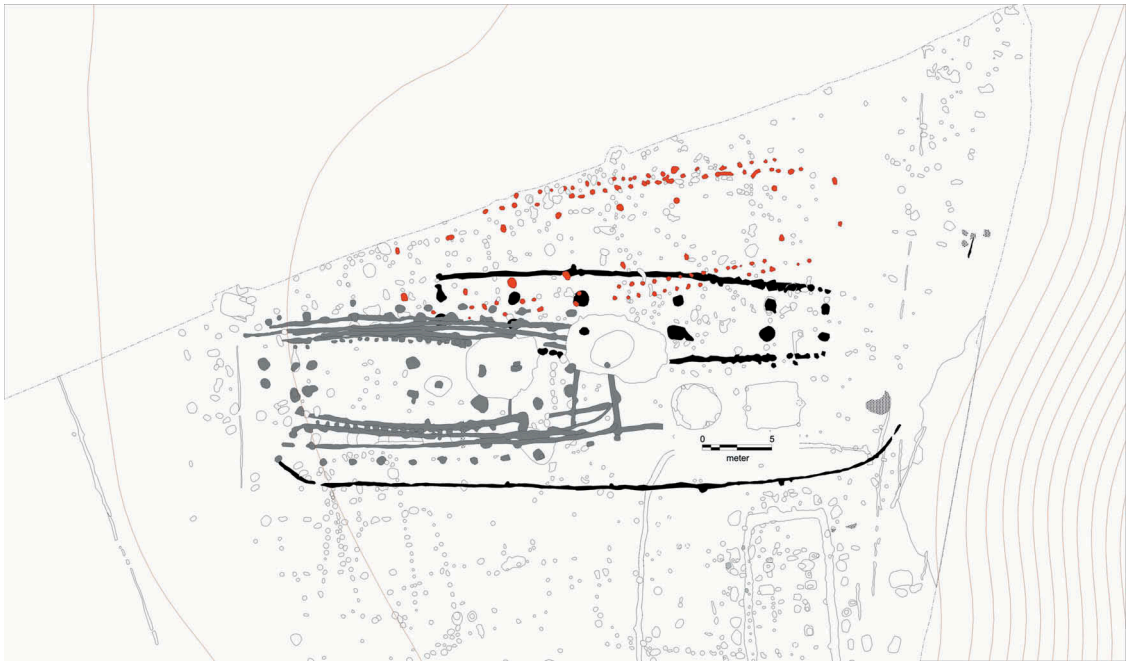

Figure 3. The northern residential area contained two hall-type *houses*. The leftmost is a palimpsest of at least three phases (K3) in the exact same spot, whereas the stratigraphically earlier hall slightly further to the northeast is single-phased (K30).

28 m long and 6 m across (K30), and the walls are made up by ca. 40-cm-wide cut timber founded in a wall-trench (see Figure 3). The fence just south of the hall is presumably contemporaneous with this building. The youngest of the houses has three phases, almost placed exactly on top of each other (K3). All the house-phases are around 28 m long, whereas the width seems to differ and grow over time. Thus the earliest phase is 6.5 m wide and the younger one, almost 9 m wide. Furthermore, the latest phase has a characteristic type of architecture in the wall, with sturdy and inclining outer supporting posts. This later phase is the only one with this type of walling. Owing to the repeated use of the same building area, the gables are particularly hard to unravel, but seemingly a single set of roof-bearing posts is placed in each gable, and often with a centrally placed 'sule'-post, in one of the sections, and one to two more sets inside the house. Both these buildings showed very robust roof-bearing posts, often dug into the subsoil as much as 1.5 m. Typologically as well as dating-wise, these houses belong to the late Germanic Iron Age and into the early Viking Age (i.e. AD 600–800). A third building in the area needs mentioning as well; the house is 32 m long and 6.5 m wide, which suggests yet another hall-building (K31). However, the posts are not quite as deep (26–70 cm) and the walls consist of doubly-set post. Stratigraphically, the house is younger than K30 and possibly also K3, which promote the possibility of another hall-building.

Furthest to the south on the plateau yet another hall-building appeared (K6), and covering 28 x 8.5 m, which is also of a similar proportion (see Figure 4). However, this building had a distinct architecture with one very big central room with no internal posts, and only two internal sets of roof-bearing posts as well as one set in each of the gables. A curved, rather deep trench held the wall-posts, which was supported by outer inclining posts. Such architecture is reminiscent of the style and size of the symmetrical Trelleborg houses (Nørlund 1948, Skov 1992, Schmidt 1994), but of a later type belonging to around AD 1000.

Between the mentioned hall-buildings, a series of more diverse structures can be found. Of these, one in particular is very notable, namely the quadratic building visible on the aerial photos, which had an unusual appearance as well as mode of construction (K1). First, the building forms part of a complex of structures where a fence connects this building and another building (in two phases – K2 and K7) placed closely to the northeast. The fence itself is a rigid type with smaller posts placed at regular intervals on either side of the fence, thus paralleling 'aristocratic

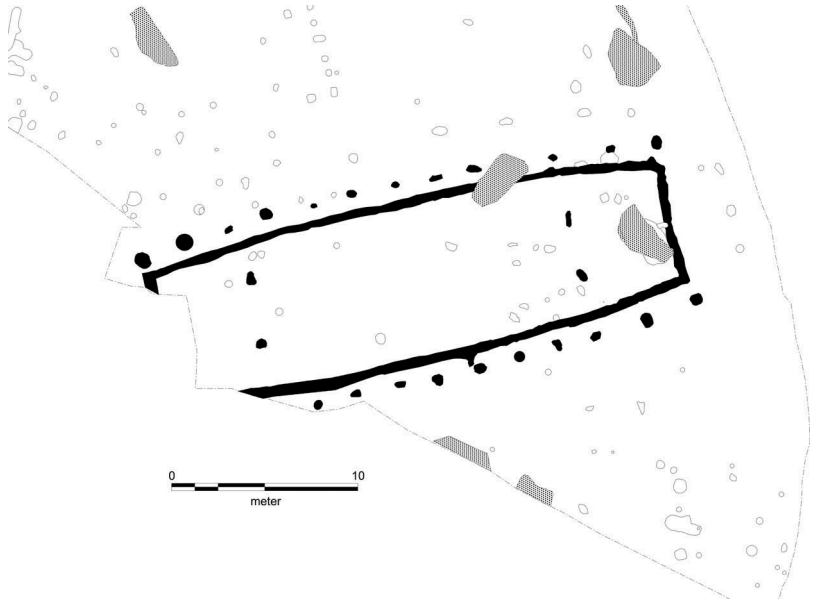

Figure 4. The southern residential area exhibited only one hall-type *houses of a late Trelleborg-type* (K6). An interesting parallel can be seen at the nearby Lundbro site, where a house of a very similar ground plan was excavated. One of the roof-bearing posts at Lundbro containing a set of spurs from the first half of the eleventh century (Mikkelsen 1991).

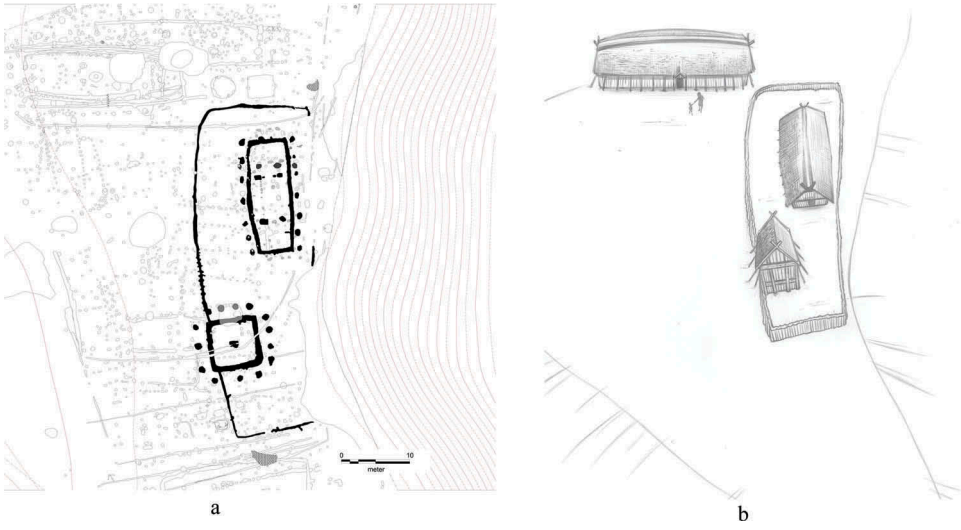

Figure 5. (a,b). Combining one of the northern halls with the fenced area, the north–south-oriented house (K2) and the tower (K1) provide a sort of possible minimum settlement overview in the first half of the eighth century. The lighter areas in the northern wall and two posts of the tower were found underneath a pit-house, which bear witness to the depth of the supporting parts of the structure. To the left is a reconstruction of that particular phase. Drawing: Tom Lock.

fencing' as seen in Tissø and Jelling (Jessen *et al.* 2011, 65ff.; Holst *et al.* 2013, Bican 2014), but of lesser proportions (see Figure 5(a,b)). The fence fades out towards the east, where it hits a small gulley towards Mønsted Å, which is currently damaged by and filled with ploughed-in material from the modern working of the fields. Inside the fencing a house-structure in two phases and turned north/south has been registered. There is no direct contact or stratigraphy between the fence and the buildings, but the overall layout and orientation strongly suggest a cohesive planning of the two buildings and the fence. In its initial phase (K7), the building is 18 × 5 m, but somewhat disturbed

by the later building. However, besides the posts in the gables, three sets of posts run along the house and towards the west a series of supporting posts seems to have been placed on the outside of the wall. The younger building (K2) is 16.75 × 6.5 m and presents a very sturdy wall-trench with outer supporting posts, whereof several in the western section have a stone-built foundation. There are two internal sets of roof-bearing posts, and the northernmost could have been replaced. A bead divider with ornamentation characteristic of the late Germanic Iron Age was excavated in the eastern wall-trench (see Figure 6). Fortunately this coincides very well with the C14-dating, thus indicating a use-phase between AD 700 and 780 (see Figure 7). A third house should also be mentioned; it is older and oriented east/west, but it informs us that there were three buildings erected at almost the same spot, and similar to the sequence of hall-buildings outside the northern fence. Connection between these structures is indicated by the reuse and apparent veneration of this exact building spot.

Figure 6. A well-preserved bead divider with ornamentation characteristic of the late Germanic Iron Age was found in the eastern wall-trench of the north–south-orientated building. This find correlates very well with the C14 dates from the same structure.

As mentioned, less than 10 m southwest of this building the square structure is positioned. Also in this case, the building consists of a wall-trench; however, the dimensions are but 7.5 × 7.5 m. The trench is very regular and approx. 90–100 cm wide and between 80 and 100 cm deep. No clear signs of post are registered in the trench. A large central post is placed inside the trench, which is to 40 cm in diameter and nearly 135 cm deep. Furthermore, 14 remarkable posts were orderly placed on the outside of the trench – four on the north and east sides, and three on the south and west sides. The distance from trench to posts varied between 70 and 110 cm, and they were between 90 and 120 cm deep, with the deeper posts usually located near the corners. Almost all of the postholes had visible, reminiscent markings of the actual posts (see Figure 8), and in five cases the inclining angle towards the trench could be registered (see Table 1). With all inclinations measured to be between 81 and 82°, these angles showed an extraordinary convergence, wherefore there can be no doubt that all the postholes must have contained posts of very similar orientations.

Furthermore, such regularity permits a calculation of the height above ground where the posts will meet

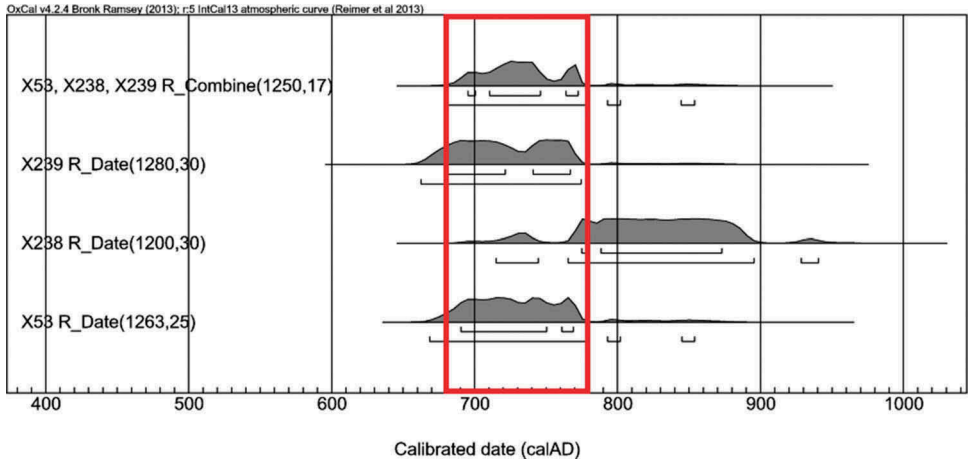

Figure 7. C14-datings from the tower, with the frame denoting the main use-phase. X53 (Barley): 669–810 AD (AAR 18,679. Conv. C14: 1263 ± 25 BP); X238 (Barley): 720–895 AD (Beta – 406520, Conv. C14 1200 +/- 30 BP); X239 (Heather): 665–775 AD (Beta – 406521, Conv. C14 1280 +/- 30 BP).

Figure 8. (a, b). Section of two of the outer inclining posts by the tower, with one (left) only showing the untouched profile of the posthole, and the dotted line marking the inclination. To the right there is another sectioned posthole with a visible imprint from the rotted post and with the different layers marked in the profile. Also, this post has an easily recognizable inclination.

Table 1. Based on the inclining posts and the excavated features of the tower, the formula and measurements used in calculating the height of the tower can be read here.

CALCULATION OF THE HEIGHT: TAN(RADIANER(A))*b	Post	b	A	C
	688	1.49	82	10.6
b = the shortest distance in metres from the edge of the imprint of the post to the middle of wall ditch.	680	1.73	81	10.92
A = angle of the post, measured at the side closest to the ditch	700	1.55	82	11.03
C = calculated wall height	668	1.5	82	10.67
	671	1.61	81	10.17

the wall placed in the trench. If the wall is placed mid-trench (which is usually the case), then a tangent relation reveals a contact point more than 10 m above ground for all the measurable posts. As a consequence of the unparalleled sturdiness of the building, this must be regarded as the least expected height, and more floors above the contact point could be probable. In combination, the proportions and distinct architecture of this building leave behind no doubt that we are dealing with a high tower, and the first of its kind in Southern Scandinavia in this period.

To the west of the tower, two small buildings of around 12 × 5 m were registered. The northern one is stratigraphically older (K38) than the tower and the southernmost one (K37) is typologically the oldest. Having the posts dug in more than 50 cm, they are interesting because such small buildings are only rarely built quite as solidly. Most likely they replaced each other and at the same time transformed into an even sturdier (and higher) structure, just like is witnessed by the architecture of the northern houses. So again, this seems to be an example of three buildings replacing each other at (almost) the same spot.

Contemporary towers and other parallels

In the archaeological record, towers are indeed difficult structures to register. However, a few noteworthy structures have been excavated, which might bear resemblance to the Toftum tower. Such is the possible tower that has been excavated at Møllemarksgård, Southern Jutland (see Figure 9). The settlement is

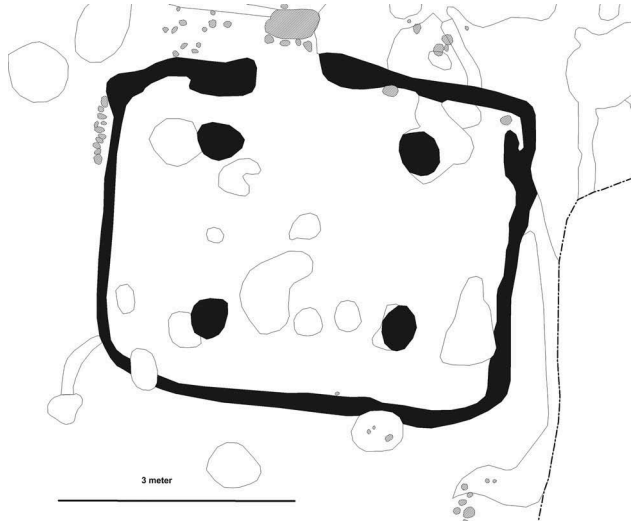

Figure 9. The tower of Møllemarksgård. Posts marked in solid black (from J.nr. VAM 1302, SB 190, 714–142).

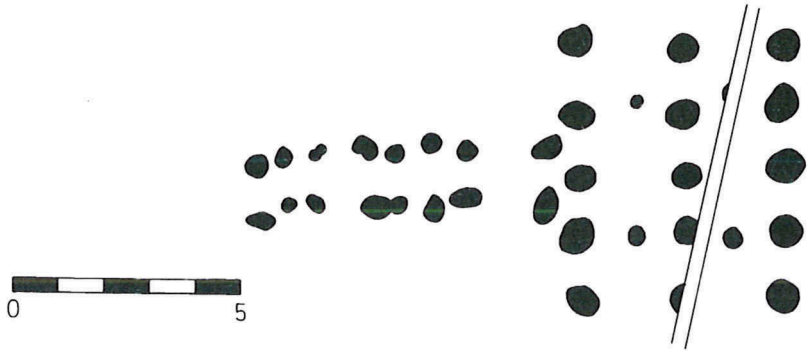

Figure 10. The tower at Tystrup I. Posts marked in solid black (from J.nr. SMV 7451, SB 050302–36).

characterized by several buildings from around the year 0, and amongst these is a rectangular structure of dimension 5.2 × 4.3 m with a wall-trench and a northern opening. Internally, four deep posts (between 80 and 89 cm deep) were excavated, thus indicating a building of some height. However, this tower is almost 700 years younger and of lesser dimensions than Toftum Næs (L. Frandsen, pers. Comm.).

Another and very convincing example of a prehistoric tower is the feature Hus X from the site of Tystrup I (see Figure 10). This building was rather well-preserved and did not see much disturbance from other constructions, wherefore the collection of post-holes was easier to decipher. A total of 15 regularly placed posts in three rows of five constituted the main bearing part, and covered 6 x 5 m. Inside these, four additional and more slender posts were erected. All of the posts were around 40–50 cm deep, and the central ones tended to be the more shallow posts. Furthermore, a marked ramp seems to have been attached to the western wall, which led the excavators to underline the similarities to the towers built along the Limes wall, which is supported by the found artefacts (mainly pottery) dating the structures to AD 200–400 (Staal 1999). Investigation of the load-bearing capacity of the building was carried out by the Technical University of Denmark (Bent Hansen, unpublished report), leading to the estimation of the height being between 11.5 and 15 m. The dating differs significantly from Toftum Næs and so does the ground plan, and bears more resemblance to the large storehouses also found at Tystrup I. The same can be said about the measurements of the posts, which are not nearly as deep as those excavated at Toftum Næs, thus making a direct comparison difficult.

Suggestions have also been put forth about the tower-like structures at the entrances and inside the Viking Age ringfortresses, but the recent re-investigation of Aggersborg suggests that the height of the gate would not have surpassed that of the crown of the earthen ramparts. The excavated postholes are simply too shallow to uphold a high building (Roesdahl *et al.* 2014, p. 208f). Four central posts at Aggersborg and a square ditch at Trelleborg are two further features that have been identified as possible towers. However, both have been dismissed due to their too shallow foundations and since they are no longer viable as parallels (Nørlund 1948, p. 92f, Ulriksen 1993, p. 190). Also in a broader geographical perspective, the parallels are scarce. As these types of structures are absent from ordinary settlements, only more distinctive building complexes, such as fortifications, do at times contain remnants of earlier phases with wooden constructions. Such sites have often been rebuilt repeatedly (or purposefully demolished), thus leaving shattered the more vulnerable wooden sections and consequently only partly recognizable to archaeological investigation. However, similarities can be found in structures dating from the early Carolingian expansion (i.e. the latter half of the eighth century), and thus being contemporaneous with the main phase at Toftum Næs.

Esesfeld

At the Carolingian fortress Esesfeld, near Itzehoe/Germany, the sole excavated entrance displays some of the same features as at Toftum Næs (Schäfer 1978, 1980, Kühn 1995), which is a seemingly awkwardly placed central post. In Esesfeld, the combined layout of the earthworks, embankments and moats dictates a

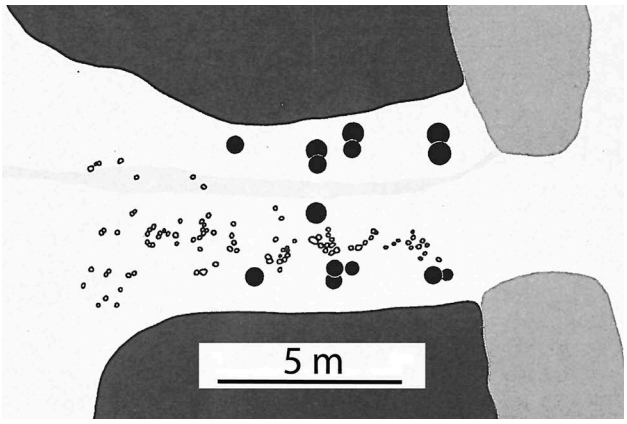

Figure 11. The tower at the gate of Esesfeld. Posts marked in solid black (after Kühn 1995).

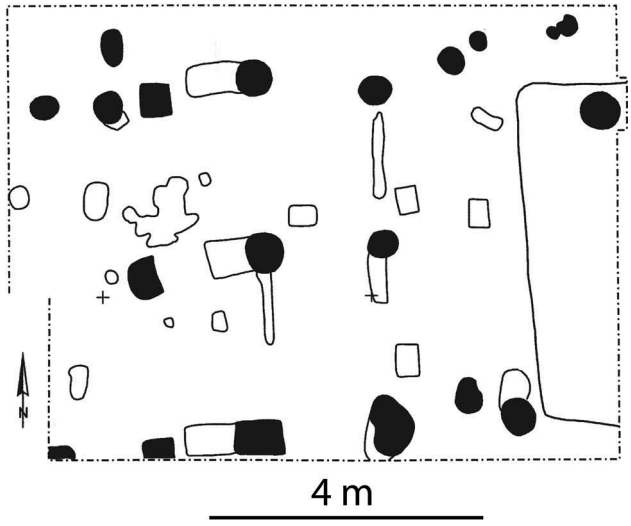

Figure 12. The tower at Hünenburg. Posts marked in solid black (after Ruhmann 2004).

very limited way of access to the internal areas of the fortress, and the entrance has a layout of two 6-m-long parallel lines placed 3 m apart and consisting of massive posts (ca. 60 cm deep), but no wall-trench (see Figure 11). Just in the middle of these, a central post was excavated, and one that was even supported by stones packed around it. An encircled area of at least 1 ha thus revealed an entrance allowing no more than two times 1.5 m of passage around the central post. According to the diary notes made by the excavator Gottfried Schäfer, there really were no architectural reasons for placing such a sturdy post here, as the two outer lines of posts should suffice as support for the tower. He believes its sole purpose was to function as a deliberate hindrance when passing through the gate (Lemm 2011, p. 468ff.). However, the central post seems to be a significant feature of tall, slender buildings of the period (see below).

Hünenburg

Many of the same features can be seen in the layout of the Hünenburg fortification (see Figure 12), near Stadtlohn, which presumably also belongs to the Carolingian expansion.[2] In the eastern and sole entrance through the embankments, a tower-like structure was excavated. Again a rectangular layout with a width of 6 m and perhaps as much as 10 m in length was registered (Ruhmann 2004, p. 10ff.) The structure is dominated by nine main posts in three lines, which therefore make up a similar division of the entranceway as seen in the former example. A previous phase in which a trench-like formation might have connected the individual post in each of the three lines is possible. This initial (and sporadically preserved) tower also seems to have had a central post, which was, as the only one, wedged in with larger stones. Again, the limitation and control of access to the enclosed area are demonstrated in the actual layout and architecture of the gate.

The strength of wood – Stellerburg

Even if the timbers used at Toftum Næs appear overly sturdy to the naked eye, another comparison to contemporary tall wooden constructions provides essential information about the magnitude of the Toftum tower. While also being of a more box-like construction,[3] the gate and tower leading into the substantial Stellerburg in the Dittmarsch of Schleswig-Holstein are very well preserved and provide information about the timber dimensions needed to build a protruding structure of the given magnitude (see Figure 13). When combining the dimensions from the preserved posts from the Stellerburg gate with the measurements of the postholes at Toftum Næs, some of the dimensions are comparable. At Stellerburg, the larger of the bearing posts exhibit a rather uniformly sized profile of approx. 35 × 35 cm, whereas the smaller posts are rectangles of around 40 × 25 cm (Haseloff 1942: Tafel 2.1). As the earthen ramparts are believed to have been at least 4 m high, the gate and tower would logically have had to surpass that height and support another storey and perhaps also a top level

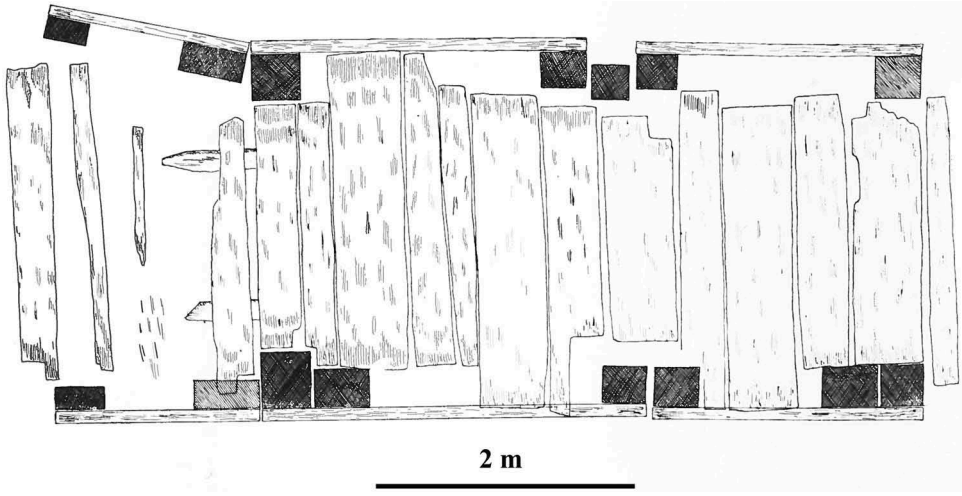

Figure 13. Northern gate at Stellerburg. Posts marked in solid black (after Haseloff 1942).

with an embrasure or a walkway (ibid.: 147). A total height of around 6–8 m seems to be a reasonable, minimum estimate. These dimensions agree well with the 35–40 cm width of the timber markings registered in the postholes of the Toftum tower; however, a noticeable difference is the inclining outer post, which indicates a higher load-bearing capacity than is permitted by the more traditional box-type construction of the Stellerburg Gate.

Reasons behind the sturdiness of the Toftum tower might be two-fold: first, that the construction simply is higher (as indicated by the angle of the inclining posts) and thus heavier, and second, that the slimness of the building and the absence of encasing earthworks would make it more prone to wind pressure, and the inclining posts guaranteed a much more rigid and stable architecture. Most likely a combination of the two points resulted in the registered architecture. In conclusion, even if the timbers are comparable between the tower at Toftum Næs and the presumably lower Stellerburg gate, the more advanced architectural craftsmanship with inclining and securely tenoned outer posts (which hereby lock and bind the individual parts of the tower frame to each other and anchor them to the ground) makes viable a building that could have been of a significant height, and easily doubly that of the Stellerburg case.

Abinger – a later case

A frequently cited tower-site is the later Abinger motte-and-bailey (see Figure 14). In the present context, the Abinger Motte is interesting due to the fact

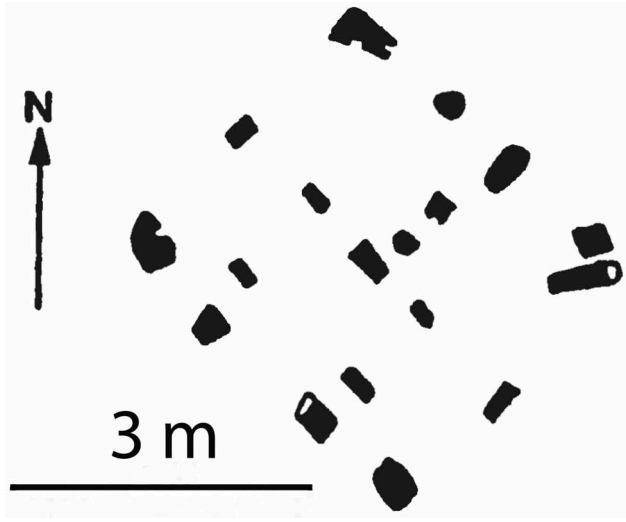

Figure 14. The ground plan of the Abinger. Posts marked in solid black (after Hope-Taylor 1950).

that the construction itself is entirely intended to function as a towering structure with the ability to withstand at least some kind of defacing and back-pressure to the bearing elements of the building. In essence, the principle behind a motte-and-bailey is maintaining constructional simplicity, yet being functionally formidable – easy built, easily used – and thus epitomizing the idea of a defensive tower with surveillance capabilities. What is interesting regarding the Abinger tower is its rather limited size of just over 3 × 3 m. The main feature of the timber tower seems to have been the four corner posts on which the whole construction rested, and amidst these a centrally placed post would have provided further stability to the structure.[4] All five postholes are

registered as around 4 ft (i.e. 120 cm) deep (Hope-Taylor 1950, p. 28f) and clearly confirm the central post as being an integral part of the overall architecture, and an inherent feature of high buildings as they were constructed in the later centuries of the first millennium. However, compared with the Toftum tower, it is striking that the actual floor plan at Abinger is only a quarter of the former, and still would have had at least two storeys (with a total height of 5 m or more), which lend argument to the conspicuousness of the Toftum tower. Where the traditional understanding of the wooden version of a motte-and-bailey leaves out the structure being used as living quarters because it was simply too narrow (Beresford 1987, p. 96ff.), the sheer magnitude of the Toftum tower places it in another category; if each storey takes up perhaps 2.5 m vertical space, there would have been available a considerable and roofed area in three floors (ground floor and rooftop excluded) of around 100 m^2. *Albeit* a divided mode of room structure, a combined area of this size actually surpasses the main room of either of the main halls. Conclusively, while the architecture of the Abinger towers' small ground plan shows that its vertical extent was of principal importance, the capacity of the Toftum building also seems to have been a valued feature. Why else an incomparable 6x6 m in each floor? As a consequence of this copious architecture, it seems fair to conclude that not only building high figured prominently in the plans of the Toftum proprietor, but equally so to have available a solid structure easy to defend, and a structure that could contain a considerable amount of goods or people, and even function as living quarters if needed.

Mono- or multifunctional

Hardly ever do buildings of this period see only mono-functional use, but at this point in time such buildings do start to appear, and with the unique architecture the tower exhibits, a unique use must be contemplated. However, the connection with the fence and adjacent building could indicate that the tower is placed near an entrance to the area. As no regular openings have been registered in the fence, access could even have been through the ground floor of the tower. Just south of the tower, a small entrance through the fence might have existed, but disturbances prohibit any final conclusions about this possibility. An entrance at this position would in any case have to be regarded as part of the core functions of the tower. The entrance hypothesis is also relevant when considering the mentioned smaller and filled-in gorge leading down towards Mønsted Å. As mentioned, just south of the southernmost hall-building, a deep sunken road is still in use. The long-term traffic-erosion of this road has actually swallowed the southwestern corner of the eleventh-century hall-building, thus demonstrating that the road was in use after the (so far) latest building in the vicinity. Even if contemporaneous use cannot be ruled out, a possible predecessor to this late sunken road could therefore have been the small gorge that leads directly towards the tower. Visitors to Toftum Næs could see the tower from a distance and would eventually have been funnelled to its foot by the configuration of the natural landscape in combination with the immediate road system. This is exactly the function recognizable at the Esesfeld, Hünenburg or Stellerburg examples, where the visitors need make entrance through and in between the posts of the gate *cum* tower itself. Conclusively, at least two of the sidewalls needed to have been unboarded for people to pass through. However, although the narrow space as witnessed at the different gates evidently posed no logistic problem, so does the indication of an enclosing wall-trench at Toftum – there are no obvious 'gaps' in the walling, which suggests that passing through the tower would not have been such a clear-cut option. In actual fact, there is no obvious place for an entrance into the tower, and access via some kind of ladder or ramp into the second floor is a real possibility.

Why high – the character of Toftum Næs

In essence, the tower at Toftum Næs shares several features with contemporaneous high structures (i.e. a central post), while exhibiting its own architectural solutions (inclining posts, deep wall-trench). However, the tower's context is an atypical scenery, which seems to be a specialized settlement with production capacity. In total, the settlement might cover as much as 70,000 m^2, and has revealed several detector finds and areas of high levels of phosphate indicative of long-term or intense use. The find material ranges from weights, lead spindle whorls over bronze fibulas, but also cover preserved silver coins, silver and gold

Figure 15. (a-d). Two coins from the site. The topmost is from the Carolingian area, released during the reign of Louis the Pious AD 814–840 – also known as a Temple Dinar. The other coin is a very unusual and rare English coin minted under King Ceolwulf of Mercia 821–823.

jewellery as well as high-grade and elaborate gilded objects. Several of the finds are more ordinary and appear in similar localities, whereas the coins and jewellery have been of extraordinary quality and origin (see Figure 15(a–d)). There seems to be a slight tendency for the finds to cluster in the southern, elevated foreland near the hall-buildings, which might, however, be related to the higher intensity of investigation in this particular area. The find material indicates a wide network of trade and import of unique objects, which seem to mirror the unique and distinctive architecture of the buildings of this same area. Clearly, exchange of both ideas and objects between Toftum Næs and other parts of Northern Europa must have taken place during the sites' main use-phase.

However, the lower area to the north (3), as far as to the wetland where the two streams conjoin, seems virtually covered with pit-houses. In the aerial photos of different operators such as Cowi, KortCenter.dk or archaeologist Lis Helles Olesen (Olesen and Mauritsen 2015, p. 133ff), the pit-houses stand out and can be estimated to surpass 100 entities or more. The autumn of 2015 provided the opportunity to perform a geomagnetic survey of the areas (Fuglsang 2015), and the results support the aerial reconnaissance, and indicated an even higher number of pit-houses, and a distribution of more regular pits containing stones and signs of heating and the use of fire. In order to verify these different results, a series of trial trenches in combination with more detailed investigation was laid out. As a result of these, in the area immediately north of the hall-areas several pit-houses and postholes were registered, but they faded and almost disappeared shortly thereafter, as the area starts to slope to the north. In the lower areas further to the north, a greater amount of structures was initially registered, and here the trial trenches supported the survey results. Furthermore, and in addition to the pits and pit-houses, several clusters of more ordinary postholes were registered. These were not as sturdy and

easily ordered into separate ground plans as for the southernmost area, but indicate an area of intense and diverse activities, which might cover production units in the pit-houses and post-built housings spread amongst each other. The area has not yet been fully excavated, wherefore detailed dating and subdivision into different phases were not possible; however, the clustering of pit-houses and the proximity to the Limfjord do link the site to several similar localities along the Limfjord coast, which has a corresponding dating and structure (Christiansen and Sarauw 2014; Roesdahl *et al.* 2014). However, if these pit-houses and postholes are indeed contemporary structures, such a juxtaposition of features is quite rare, and could indicate another unique trait of the Toftum Næs settlement as a whole.

In total, the combined investigations at Toftum Næs reveal a succession of activity zones (see Figure 16), which are dispersed topographically and also to some extent chronologically.

(1) **Primary residential areas**. It covers the highest position on the southern part of the promontory.
(2) **Secondary activity zone**. It is delimited as an area covering the southern field immediately around/north of the hall-area. This seems primarily to be in the late phase of the site – later than the tower and northern halls – and indicates that this part of the site changed its character and perhaps also functions.
(3) **Primary activity zone**. On the northernmost tip of the promontory, an area of approx. 18,000 m^2 shows intensive signs of a diverse range of activities, whereas the area around is more extensively used. At first glance, the production taking place in the pit-houses

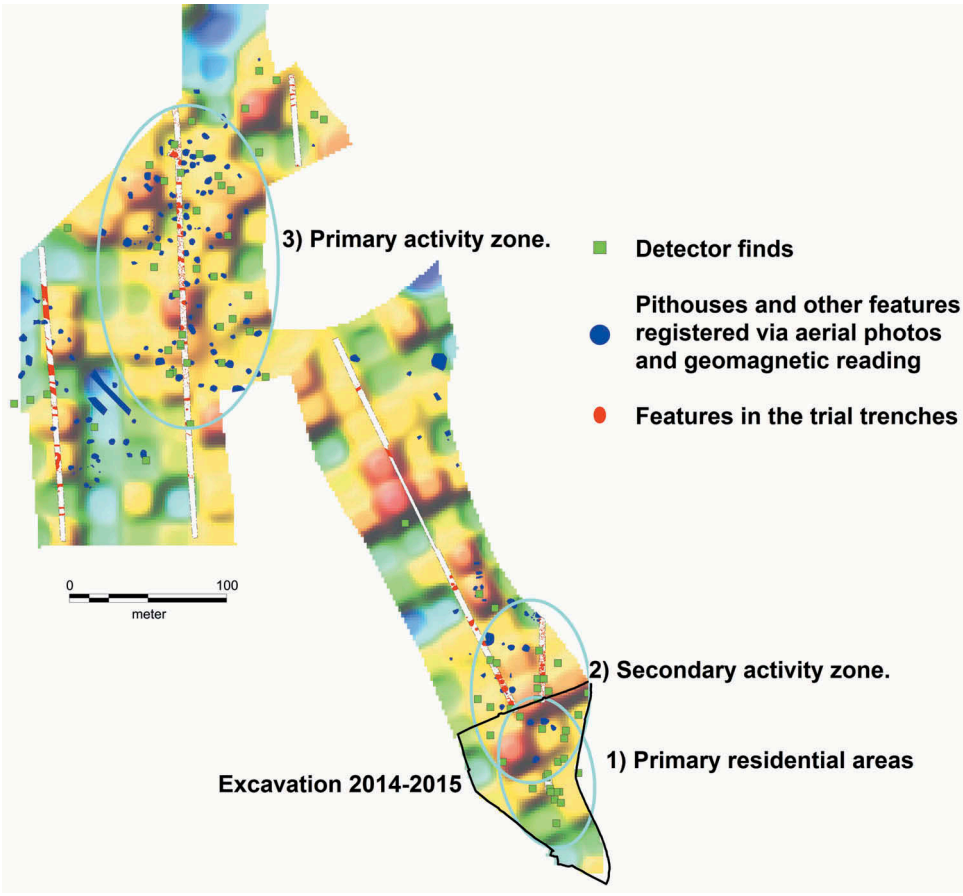

Figure 16. Map showing all the different surveys carried out at Toftum Næs. The difference in saturation indicates the levels of phosphate where the darker areas represent higher concentrations of phosphate. To the west and south of the site, several years of clay extraction have removed the surface soil. However, the indications of different types of activities seem to demonstrate that fortunately the site did not continue into this area. Map: © Styrelsen for Dataforsyning og Effektivisering.

seems the more dominant feature, but the novel registration of post-built structures has added another dimension, and possible living quarters should perhaps be comprehended as well.

Functional backdrop

It is this areal division of function that the Toftum tower has to be understood against, and in combination with the absence of find material, only architecture and topographical position provide the more tangible indicators for the actual function of the tower. What first comes to mind is the possibility of overlooking a larger area from the higher position the building permits. In this respect, the rather restricted topographical possibilities and outlook conditions the small promontory grants the Toftum tower become pertinent. To illustrate this situation, three viewsheds (at 2, 12 and 24 m above ground) have been generated and a rather concise picture emerges (see Figs. 17, 18 and 19).

If standing directly on the ground where the tower is, your westward outlook would be severely impaired, and from a few metres away until the hills start rising again on the other side of the Jordbro Å, virtually all of the riverbed as well as the northernmost pit-house area is out of sight. The viewshed changes completely at 12 m (i.e. standing atop the tower), where the entirety of the two rivers, all of the different areas described above as well as a good part of the lowland area of where the conjoined rivers flow towards the Hjarbæk Fiord become visible. However, even though Toftum Næs in the most local sense is positioned at a high spot, at a near distance the higher ground will block almost all visibility outside a 2 km radius. As witnessed by the 24 m viewshed, this situation hardly changed when doubling the height and the local visibility still dominates the picture. Thus, even if the building does tower above the other structures, it seems rather clear-cut that it was not intended to function as an outlook platform where, for example, arriving (and unwanted) groups of people would have been detected from afar. Rather, the attention seems to have been directed towards the local environment and in particular the northernmost production area with its many pit-houses. For this reason, a brief look at the topographical ordering of contemporary sites that contain areas of production and/or related commercial functions could clarify the purpose of the tower.

Commercial control

At this point in time, the Jutland peninsula witnessed the arrival of a new type of settlement

Figure 17. Viewshed showing in light colouration how far – or how close – you could see from the ground, at the spot where the tower was built. © Arjen Heijnis.

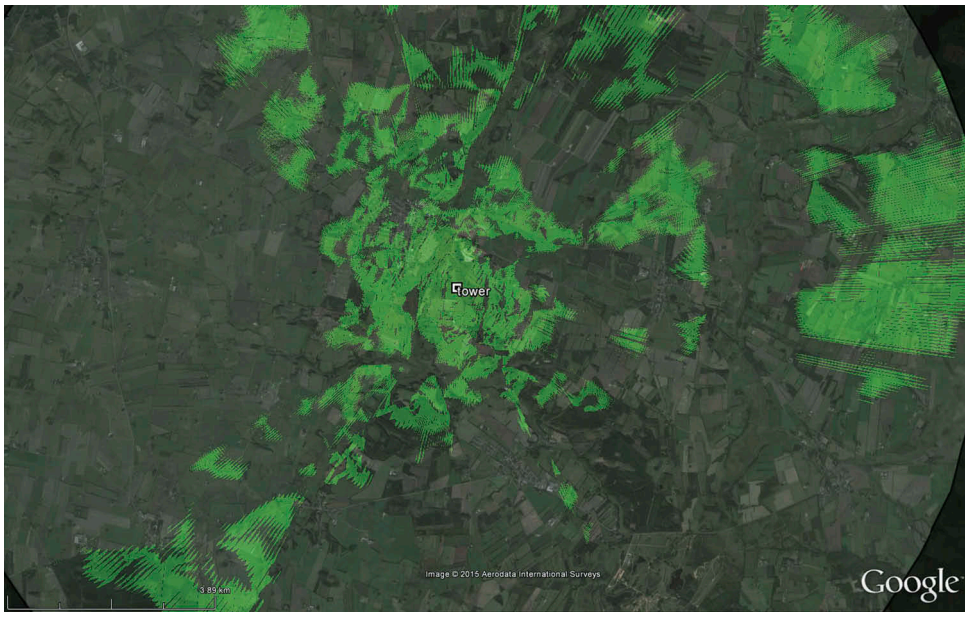

Figure 18. Viewshed showing in light colouration how far you could see from the tower if you were positioned 12 m above ground level, i.e. standing on the top level of the tower. © Arjen Heijnis.

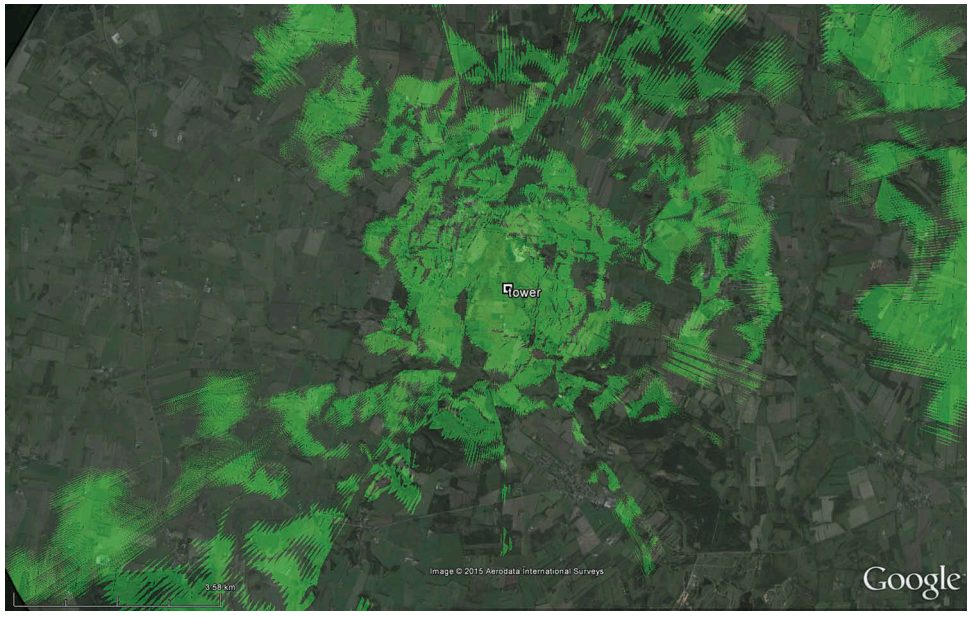

Figure 19. Viewshed showing in light colouration how far you could see from the tower if you were positioned 24 m above ground level. © Arjen Heijnis.

organization, namely the proto-towns as they developed in Ribe, Aarhus and Hedeby. These are very often organized into a plot-like structure (Feveile 2006, Pilø 2007), inside an easily recognizable demarcation zone within which the commercial life can proceed in a topographically regulated, socially embedded but otherwise presumably rather free economic setting organized around fixation of value by tradition and custom (Sindbæk 2007, Dobat 2012, Skre 2015).

However, a closer look at the dating of the different localities in comparison with Toftum Næs informs us that the tower had a primary use-phase that predates the establishment of the more regular *emporios*, and instead falls within the period (i.e. the eighth century) in which the first larger, seasonal markets with clear

indications of long-distance trade started to appear. This situation would entail that not only local traders journeyed the South Scandinavian markets, but likewise foreign merchants with no apparent social relations to the other traders (or local powers) and whose commodities were sufficiently exotic to not be enrolled in any traditional means of value estimation. Combined, this situation gave rise to a much higher degree of independent economic agency than previously (Skre 2015, p. 167ff., for a thorough definition), and which must have necessitated a need for a continuous increase in regulated commercial sites – sites that were specialized not only in production but also in trade per se, and at the same time could guarantee safe passage for the potentially vulnerable foreign traders. Eventually, and as a result of this move towards certified commercial localities, the systematized and well-regulated emporios did finally emerge. Consequently, the Toftum tower was erected at a time in which commercial sites witnessed a marked intensification in regulation and topographical control, and especially those that garnered foreign traders and commodities.

What is interesting in this respect is the similar and easily recognizable structure many of these unique localities have, often a double organization of the area with the mentioned demarcation zone close to the seashore, and a more removed residential area, which is positioned higher and contains fortifications, aristocratic seats or both. In Jutland the most prominent is the Hedeby scenario, with the ringwall and commercial area *cum* harbour inside, and the rather suspicious Hochburg on a higher plateau to the south (Kalmring 2014). In the large ports-of-trade excavated at Kaupang and Birka, this bisected organization is even more pronounced and the Huseby behind Kaupang (Skre 2007, p. 446ff.) and the constellation of the Birka/Sorte Muld with the fortification at the nearby and higher outcrop placed in close vicinity to the enwalled commercial area near the water bear close resemblance to Hedeby (Kalmring 2012). Furthermore, the residential area at the royal site of Hovgården at Adelsö just opposite and overlooking Birka underlines the presence of a 'distant' aristocracy, possibly taking care of the administration of the commercial area on Björkö (Rydh 1936, Brunstedt 1996).

A similar topographical orientation can be witnessed at the larger aristocratic sites such as Lejre (Christensen 1993, 2010b, 2015, p. 55), Tissø (Jørgensen 2003, Thomsen 2009) or Järrestad (Söderberg 2003, p. 45ff.) or more production-oriented sites such as Bejsebakken (Nielsen 2002, Christiansen and Sarauw 2014) or Löddeköpinge (Svanberg 2000), all of which reserve the higher ground for the bigger hall-type buildings, while the surrounding and low-lying areas (and often with closer proximity to the nearest waterways) are filled with a considerable amount of pit-houses. Whereas the scales of most of the commercial proto-towns and the aristocratic sites surely surpass those of Toftum Næs, the intra-site organization with separate areas for more specific functions is recognizable also at Toftum Næs. Especially the repeated tendency to position the higher strata of society on an equally high physical position is evident (and often accompanied by some kind of fortificatory structure), and even seems to have been a recurring method of underlining and legitimizing supremacy throughout the late Iron Age and into the early Middle Ages (Näsman 2001, Heimer 2009, Jessen 2012). Furthermore, in later periods a very notable type of building might provide a functional parallel (at least partly) to the Toftum tower. As recently pointed out by a number of scholars (Olsen 1967, Nilsson 2003, Anglert 2006, Sundqvist 2006), there are certain architectural features appearing in the early Romanesque churches that are not strictly related to any type of divine worship or to the Catholic liturgy either. In particular, the western towers of the early Romanesque churches take such a position, as the different uses of this part of the church often can be related to more profane activities, without any apparent relation to the otherwise clerical life in the church. Storage of seeds collected through taxation, place of refuge in times of conflict or even as a private area for the patron family has been suggested. These western towers could also have been used in connection with private sanctuaries or perhaps even more elaborate banquets (Anglert 2006, p. 171ff, Sundqvist 2006, p. 20f). For these reasons, it seems clear that the west towers of the churches indeed did leave open the possibility of non-liturgical activities, and instead were oriented towards activities associated with older traditions, which used to take place in the Iron Age halls – the public exhibition of power and establishment of a palpable hierarchy (Jessen 2012, p. 29f).

Conclusively, and with both the site-situational context and different 'towering' parallels in mind, it seems evident that the Toftum tower is a type of building not registered before in South Scandinavia, but which seemingly fullfils a series of functions required by many aristocratic, production-site with potential ambition for foreign trade. First is the organizational aspect, where a patron character of some kind administers the production areas (the pit-house assemblages of area 3), and would need a tool for that purpose. A high building at the right spot, such as the Toftum tower, would do the job brilliantly at overlooking and keeping the area under surveillance. Second, the actual produce needs be taken care of, and a reasonable interpretation of the exaggerated available space inside the tower could be explained as being used for the storage of valuable trade-goods, or even some kind of toll, duty or taxation profit.[5] Third, when an unfamiliar crowd gathers at small places with the specific purpose of maximizing personal revenue, it seems to be a universal truth that trouble is bound to happen, either because locals get at each other (or their masters) or because outsiders would want to take advantage of the situation. For whatever reason, and all of the here mentioned could be relevant for Toftum Næs, the possibility of upgrading your defences with a tower would be an intelligent initiative, and the Toftum tower could certainly have fulfilled the same functions as the later motte structures. Last, the architecture itself, being of such a unique type, would to a great extent underline the ingenious and dynamic character of the proprietor. In combination with the magnificent halls nearby, both visitors and regular dwellers would constantly be reminded of the powerful proprietor at the top of the hill. In total, through the tower, halls and their position, the material manifestation of the local administration in this way becomes quite obvious, and the intertwined character of person, function and building roots itself in the overarching tendency for the Iron Age aristocracy to build high and build big.

Ritual landmark?

Another possible rendition of the towering structure relates to the concept of the pre-Christian cult building, the so-called *hov* (Olsen 1966, Sundqvist 2009, Andrén 2013). Numerous ritual localities in the written record of the Norse sagas include a notification of their elevated position compared to the surrounding buildings, which, as mentioned above, is a conceptualization resting deep in both the social and religious life of the Late Iron Age and the Viking Period. This has led to a century-long debate, particularly in the early twentieth century, about whether the pre-Christian temples in Scandinavia would have followed the same format (Boëthius 1931, p. 31ff; Lindqvist 1923, Palm 1937, versus Oelmann 1933, p. 174ff; 1940, De Vries 1935). In addition, the archaeological record shows that important structures (including possible pagan temples) are built almost as high as possible and that they are also positioned in a topographical setting underlining their magnitude (Holtsmark 1970, Gräslund 1992, McNicol 1997, Anglert 2006, Larsson and Svanberg 2006, Jessen 2012, Christensen 2015). Owing to this inclination, the reconstructions of the few ritual buildings of the period tend to have been made very high (Lindqvist 1923, Rosborn 2004, Jørgensen 2005), wherefore an interpretation of the tower as being of a ritual ilk might seem straightforward. Conversely, several of the already-mentioned settlements (Tissø, Lejre, Järrestad, Bejsebakken, Erritsø a.o.) all seem to follow the same template, with a larger, prominent hall-type building and a smaller sidehouse, which in several instances are enclosed by fences and seem to indicate special ritual functions. The appropriate interpretation to this constellation would be that the main residence is equipped with some kind of building with a temple function. Accordingly, if this constellation is to be transferred to the situation at Toftum Næs, then the building just north of the tower needs be the one regarded as of a ritual kind. Please keep in mind that also this house has a conspicuous architecture with the western wall (in the latest phase) having a very sturdy type of foundation and one capable of upholding a significant and tall wall. Furthermore, the ground plan, with two sets of main roof-bearing posts, bears a clear resemblance to the Uppåkra temple, and the north/south orientation follows the layout of the mentioned hall-buildings *cum* sidehouse. Conclusively, the tower still stands as an exceptional structure and seems to expand the operations of the settlement rather than fulfilling the role as a ritual landmark or *hov*.

Concluding remarks

As it can be seen from this preliminary presentation of Toftum Næs, after only about 10% has been excavated, the site stands out compared with more regular settlements from the period. The most obvious reference seems to be the chieftain sites in East Denmark and Scania; the long continuity and several hall-buildings following atop one another have parallels at e.g. Lejre, Tissø, Toftegård or Järrestad (Jørgensen 1998, 2003, Tornbjerg 1998a, 1998b, Söderberg 2003, 2005, Christensen 2010b, 2015) and that includes several central building details in the halls. Especially the principal hall-building from the first half of the seventh century, with a very slender length/breath ratio and sturdy roof-bearing post with regular intervals from gable to gable, presents an 'eastern' type of hall-building. The fenced area with a smaller building and the tower also indicate the site's significance. The tower is a unique building with possibility of overviewing the area, retreat and storage, but perhaps above all meant to cause admiration and respect by those who visited the settlement. The many pithouses at the tip of the promontory suggest an activity area for gathering and/or production, where people could meet up and goods could be produced and exchanged. The finds are of high quality and the coins show contacts reaching beyond the Scandinavian area. Consequently, a significant chieftain lineage with the ability to maintain power for several centuries while continuously constructing innovative and unique buildings inhabited Toftum Næs.

Notes

1. A dendrochronological dating has been made of the remains of a roof-bearing post. The youngest preserved year ring was formed in AD 585; with the missing sapwood it can be calculated that the timber was felled after about AD 605.
2. Since the initial excavation in the early 1950s, the find material has been lost, wherefore the dating of the posts and tower rests on the drawings and diary made by the excavators. The majority of pottery finds do, however, belong to the eighth century, as does a culture layer found in connection with the tower (Ruhmann 2004: 19–20).
3. In this respect Stellerburg, as well as the other Carolingian examples, bears clear resemblance to the very simple, four-post structure (i.e. a box) upholding the central tower, which has been excavated at numerous, small Roman fortifications spread virtually all over the Roman Empire (Baatz 1976, Hanson and Friell 1995).
4. Whether the sides are open or closed has been debated (Ericsson 1992:37ff), but since part of the surface was removed by modern earthworks, no clear-cut answer can be given.
5. The collection of taxes is generally accepted as a means to establish the extended network of commercial sites of the Viking Age, where a patron guaranteed safety and a place to rest, whereas the trader paid to obtain this protection. The only contemporary reference to income by taxation is the *Annales Regni Francorum,* which states that the Danish king Godfred (Godofrido) sacks the merchant town of Reric, which allegedly was a town that had provided him with great wealth (via taxation). Also the place-name Ribe (Ripensis) seems to indicate a toll-reference as the merchants' payment for their lots in the mercantile town of Dorestad is called Ripensia. Thus, the name Ribe could have a direct link to toll payment at this place (Sawyer 1986, Middleton 2005).

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